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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,939	01/16/2001	Everett Arthur Corl JR.	RAL920000090US1	5563
25299	7590	09/16/2005	EXAMINER	
IBM CORPORATION PO BOX 12195 DEPT YXSA, BLDG 002 RESEARCH TRIANGLE PARK, NC 27709			FILIPCZYK, MARCIN R	
			ART UNIT	PAPER NUMBER
			2161	

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/761,939

Applicant(s)

CORL ET AL.

Examiner

Marc R. Filipczyk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 6-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Action is responsive to Applicant's Appeal Brief filed June 30, 2005 in which claims 1-5, 26 and 27 are pending. In view of the Applicant's comments, Examiner withdraws the Final Rejection submitted on February 3, 2005 and a new non-final Action is submitted on the merits.

In view of the Appeal Brief filed on June 30, 2005, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5, 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the segment "Almost-Exact Rules" is indefinite. Almost-Exact Rules are not definite because the meets and bounds of what constitutes Almost-Exact Rules is not

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clear and inconsistent. Second, the segment “Other Rules” is indefinite. It is not clear what the meets and bounds of Other Rules are.

Regarding claim 5, the segment, “each rules” is indefinite. It is not clear what exactly is claimed.

Regarding claim 27, the term, “component” is indefinite. It is not clear how component relates to a wild card.

Regarding claims 2-5, 26 and 27 depend from claim 1, and are therefore rejected on the same basis.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5, 26 and 27 are rejected under 35 U.S.C. 102(e) as best as the Examiner is able to ascertain as being anticipated by Lu et al., herein “Lu” (U.S. Patent No. 6,778,984).

Regarding claim 1, Lu discloses a system and method comprising:

providing a database of rules; (fig. 1 and col. 2, lines 21-25)

applying an algorithm to the database to identify all the rules; (fig. 1 and related text, i.e., col. 4, lines 1-57)

*(Note: all the rules comprise Almost-Exact and Other rules)*

partitioning the database so that a set of rules (*Almost-Exact Rules*) are grouped into one or more groups; (abstract, lines 3-7, col. 5, lines 43-49 and fig. 6, **cycle #0**, rules 0-15) and

partitioning the database so that another set of rules (*Other rules*) are grouped in at least one separate group (abstract, lines 3-7, col. 5, lines 43-49 and fig. 6, **cycle #1**, rules 16-31).

Regarding claim 2, Lu discloses a step of using search algorithm (*Full Match*) to test data with the set of rules (*Almost-Exact rules*) in the group (col. 2, lines 22-47).

Regarding claim 3, Lu discloses a step of using algorithm (*Software Managed Tree*) to test packets of data received from a network against the another set of rules (*Other rules*) in the separate group (col. 2, lines 22-47).

Regarding claim 5, Lu discloses the database of rules is being partitioned as a function of sub-fields within each rules (fig. 2, *input keys* and *mapping table*, see also related text).

Regarding claim 26, Lu discloses the set if rules (*Almost-Exact Rules*) include a range of values on only one sub-field (fig. 5, rule vectors).

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Regarding claim 27, Lu discloses one of the set of rules (*Almost-Exact Rules*) includes a wild card in only one component (fig. 1, don't care values "X").

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al., herein "Lu" (U.S. Patent No. 6,778,984) in view of Muller et al., herein "Muller" (U.S. Patent No. 5,909,686).

Regarding claim 4, Lu discloses all the subject matter as set forth above, in addition Lu teaches Content-Addressable Memory (CAM) (col. 6, lines 55-60) but does not explicitly use CAM because memory is expensive (col. 2, lines 11-18 Lu).

*(Note: Applicant admits that CAM is expensive: page 5, lines 1-4)*

However, Muller teaches a network system wherein CAM is used to access mask data corresponding to a particular search key (abstract, Muller). Hence, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate CAM as taught by Muller into Lu's system because Lu teaches CAM and further Lu's system is flexible and can be used as a replacement method for CAM (col. 6, lines 55-60 Lu) thus Lu's system uses

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a similar format to that of a general CAM system such as in Muller system. One would have been motivated to use CAM in Lu's system to increase performance at a higher cost.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc R. Filipczyk whose telephone number is (571) 272-4019. The examiner can normally be reached on Mon-Fri, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MF  
September 7, 2005

  
SAFET METJAHIC  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER